

CLAIMS:

1. A connector (11, 21, 31, 41, 51, 61, 71, 81) comprising:
a housing (12, 22, 32, 42, 52, 82),
a spring biased contact surface (15, 25, 35, 45, 55, 65, 75, 85)
5 facing in a front direction of said connector for establishing a contact with a
connector counterpart, said contact surface being movable within a working
area against a spring force from a first rest position to a second connecting
position by a force directed to the contact surface (15, 25, 35, 45, 55, 65, 75,
85) upon establishing a contact with a connector counterpart,
10 characterized in that
said connector comprises a rolled spring (14, 24, 34, 44, 54, 64, 74,
84) with an outer end (19, 29, 39, 49, 59, 69) protruding in said front direction
of said connector, and
said protruding end (19, 29, 39, 49, 59, 69) is attached to the
15 housing of said connector, whereby said rolled spring is at least partly unrolled
when said contact surface (15, 25, 35, 45, 55, 65, 75, 85) is moved against
the spring force.
2. The connector according to claim 1, characterized in that
said connector comprises a contact part (27, 37, 47, 57, 67, 77, 87)
20 which is movably arranged in said housing, said contact surface (25, 35, 45,
55, 65, 75, 85) is arranged on a front part of said contact part and said rolled
spring (24, 34, 44, 54, 64, 74, 84) pressing against a rear part of said contact
part (27, 37, 47, 57, 67, 77, 87).
3. The connector according to claim 2, characterized in that
25 said housing comprises a terminal (T) protruding to an outside of
the housing, and a conductive path (40) along an inner wall of the housing in
order to connect said terminal and said contact part (47) to each other, and
said rear part of the contact part (47) against which said rolled
spring (44) presses comprises a surface which is inclined in such a direction
30 that the spring force presses the contact part (47) sideways against said
conductive path (40).
4. The connector according to any one of claims 1 to 3,
characterized in that said rolled spring (14, 24, 34, 44, 54, 64, 74, 84) is
a rolled strip spring.

5. A connector according to any one of claims 1 to 4, characterized in that said rolled spring (14, 24, 34, 44, 54, 64, 74, 84) is a constant force spring having a substantially constant spring force within said working area.

5 6. A connector according to any one of claims 2 to 5, characterized in that said connector (61, 81) comprises an intermediate part (66, 86) made of a conductive material and having in a first end protrusions and in a second end a terminal (T) protruding to an outside of the housing, and

10 grooves in opposite sides of the contact part (67, 87), and wherein said protrusions are arranged into said grooves in order to allow the contact part to slide along said protrusions, and in order to establish a conductive path between the contact part (67, 87) and the terminal (T) via said intermediate part (66, 86).

15 7. A connector according to claim 6, characterized in that the rear part of said contact part (67, 87) comprises a surface which is inclined in such a direction that the spring force presses the contact part (67, 87) sideways and the walls of said grooves press against said protrusions of the intermediate part (66, 86).

20 8. A connector according to any one of claims 2 to 5, characterized in that said connector (81) comprises an inclined surface along which said rolled spring (84) is arranged to be unrolled when said contact surface (85) is moved against the spring force, said inclined surface being inclined to compensate for a change in the outer diameter of the rolled
25 spring during unrolling of the spring, such that the rolled spring constantly presses against the same point of the rear part of said contact part (87).

9. A connector according to any one of claims 2 to 5, characterized in that

30 said connector (71) comprises an intermediate part (76) made of a conductive material and having in a first end a protrusion extending along said contact part (76) and in a second end a terminal (T) protruding to an outside of the housing,

said rear part of said contact part (77) is shaped with an eave, with a first side touching the protrusion of said intermediate part, and with a second
35 opposite side directed away from the protrusion of said intermediate part, and

said rolled spring (74) is arranged to press against said second side of the eave in order to press said eave against the protrusion of the intermediate part (76).